SMIRNOVA, Rufina Sergeyvna; GUSAROVA, Ol'ga Ignat'yevna; SUKHAREV, M.I., kand. tekhn. nauk, red.; SHILLING, V.A., red.izd-va; GVIRTS, V.L., tekhn. red.

[Design and construction of light children's clothing graded by age and size; report transcript] Konstruirovanie osnovnogo detskogo legkogo plat'ia po vozrastnym gruppam i rostam; stenogramma doklada. Leningrad, Leningr. Dom nauchno-tekhn. propagandy, 1961. 40 p. (MIRA 14:12)

(Children's clothing)

SMIRNOVA, Rufina Sergeyevna; GUSAROVA, Ol'ga Ignat'yevna; SUKHAREV, M.I., kand. tekhn. nauk, red.; FREGER, D.P., red.izd-va; BELOGUROVA, I.A., tekhn. red.

[Pattern design for three (small, medium and large) sizes of women's dressmaker-type clothing]Konstruirovanie legkogo zhenskogo platiia na tri polnoty. Leningrad, 1962. 43 p. (MIRA 15:9)

(Dressmaking—Pattern design)

GUSAROVA, R.S.

Gusarova, R. S. On bounded solutions of a linear differ-[redacted] with periodic coefficients. Akad. Nauk SSSR. Prikl. Mat. Meh. 13, 241-246 (1949). (Russian)

Applying a geometric method originally used by Žukovskiĭ [Mat. Sbornik (1) 16, 582-591 (1891)] to prove the initial theorem of Liapounoff concerning the boundedness of solutions of the equation $y''+p(t)y=0$, $p(t)$ periodic of period π, the author gives a proof of a theorem of Wallach [Proc. Nat. Acad. Sci. U. S. A. 34, 203-204 (1948); these Rev. 9, 509]. Borg's theorem, of which Wallach's is a sharpening, was proved by an application of the calculus of variations, while Wallach's and Gusarova's methods are more elementary. The author then derives some new results involving conditions on $\int_0^\pi p(t)dt$. Used in the proof of these results are theorems due to Hamel [Math. Ann. 73, 371-412 (1913)] and Haupt [Math. Ann. 79, 278-285 (1918)], and a variational technique involving the integral $\int_0^\pi [y'^2-p(t)y^2]dt$.

R. Bellman (Stanford University, Calif.).

Source: Mathematical Reviews, Vol 10, No. 10

GUSAROVA, R S

Gusarova, R. S. On the boundedness of the solution of a linear differential equation with periodic coefficients. Akad. Nauk SSSR. Prikl. Mat. Meh. 14, 313-314 (1950). (Russian)

The author proves by elementary means the following generalization of a theorem of Lyapunov. "If $p(x+\pi)=p(x)$, $-\infty<x<\infty$, $\pi\int_0^\pi p(x)dx \leqq 4(n+1)+n^2(\frac{1}{2}\pi^2+4)$, $n=0, 1, 2, 3, 4$, then all solutions of $y''+p(x)y=0$ are bounded for $-\infty<x<\infty$." *R. Bellman* (Stanford University, Calif.).

Source: Mathematical Reviews, Vol 12, No. 2 .

GUSAROVA, R. S.

GUSAROVA, R. S. - "Concerning the Stability of Solution of the Cauchy Problem for a System of Linear Equations With Singular Derivatives." Sub 19 Nov 52, Sci Res Inst of Mechanics and Mathematics, Moscow State U. (Dissertation for the Degree of Candidate in Physicomathematical Sciences.)

SO: Vechernaya Moskva January-December 1952

GAL'PERN, S.A.; GUSAROVA, R.S.; FILIPPOV, A.F.

"Integration of ordinary differential equations" by I.M. Matveev. Reviewed by S.A.Gal'pern, R.S.Gusarova, A.F.Filippov. Usp.mat. nauk 12 no.3:279-283 My-Je '57. (MIRA 10:10)
(Differential equations, Linear)

GUSAROVA, R.S.

Stability of the solution of Cauchy's problem for systems of linear partial differential equations. Uch.zap.Mosk.un. no.186[a]: 219-234 '59. (MIRA 13:6)
(Differential equations, Linear)

S/126/62/014/004/015/017
E193/E383

AUTHORS: Tyapunina, N.A., Predvoditelev, A.A., Yurasova, V.Ye., Gusarova, S.M. and Zakharov, V.M.

TITLE: Distribution of impurities and dislocations in cadmium crystals

PERIODICAL: Fizika metallov i metallovedeniye, v. 14, no. 4, 1962, 582 - 588

TEXT: It has been established by Borovskiy et al (Kristallografiya, 1962, 7, no. 4) that zinc tends to segregate at dislocations in cadmium crystals, the points of emergence of idslocations on the surface of a polished specimen being revealed by etching pits. It has also been found that in some specimens two systems of etch figures can be observed, their dimensions being about 1 - 2 μ and about 0.1 μ, respectively. The object of the present investigation was to elucidate the causes of the appearance of these two systems of etch figures by studying the effect of the zinc concentration on the size and shape of the etching pits. The concentration of zinc in the experimental cadmium-zinc alloy specimens ranged from 0.01 - 10%. Electrolytic

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and ion-bombardment etching techniques were used to produce the etching pits. The etch figures were examined with the aid of an optical microscope in the case of alloys containing less than 4% Zn, an electron microscope being also used to examine the alloys with lower Zn contents. In some cases, cine-photography was employed to study the process of formation of etch figures. The angle between the surface of the polished specimen and the basal plane (0001) of cadmium ranged from 0 - 90°. Rows of small etching pits were observed in specimens with the zinc content lower than 1%. Both small and coarse etching pits were formed as the zinc concentration increased. In specimens with 4% Zn the formation of isolated hexagonal pits was observed. Starting from the zinc concentration of 6%, plate-like pits of regular hexagonal shape formed in the (0001) plane were observed only. The density of the small and coarse etch figures was practically independent of the zinc concentration, which supported the view that the etch pits corresponded to the points of emergence of the dislocations on the surface of the specimens. The results of measurements of the etch pits formed on various alloys are reproduced in Fig.6, where the relative number $(n_i/\Sigma n_i)$ of pits in a given specimen

is plotted against the etch-pits dimensions (d, μ), the various graphs relating to alloys with the Zn content indicated. Comparison of these distribution curves with the constitution diagram of the cadmium/zinc system shows that alloys with a Zn content lower than the limit of its solid solubility in Cd at room temperature are characterized by one system of (small) etch figures. Two systems of etch figures are formed in two-phase alloys, each with a characteristic size of etching pit. It can be postulated that the system of the coarse etch figures corresponds to dislocations decorated by the second-phase precipitates, whereas the fine etch figures correspond to dislocations with increased solute concentration, i.e. to Cottrell atmospheres. The results of the present investigation were taken as a proof that the presence of dislocations considerably affected the distribution of Zn in the alloys studied.
There are 6 figures and 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im.
M.V. Lomonosova (Moscow State University im.
M.V. Lomonosov)

SUBMITTED: October 2, 1961

SHALAVINA, Ye.L.; GUSAROVA, T.D.; OTTO, D.D.

Cementation of thallium from alkali solutions. Trudy Inst. met. i obog. AN Kazakh. SSR 9:106-111 '64. (MIRA 17:9)

SHALAVINA, Ye.L.; GUSAROVA, T.D.

Effect of ultrasonics on the cementation of metals from alkali solutions. Trudy Inst. met. i obog. AN Kazakh. SSR 9:121-129 '64. (MIRA 17:9)

SHALAVINA, Ye.L.; GUSAROVA, T.D.

Gallium cementation from alkali solutions. Trudy Inst. met. i obog. AN Kazakh. SSR 12:52-57 '65. (MIRA 18:10)

LEBEDEV, K.B.; GU[illegible]AROVA, T.D.; [illegible], V.A.

Rhenium cementation from alkali solutions. Trudy Inst. met. i obog. AN Kazakh. SSR 12:168-175 '65. (MIRA 18:10)

SVYATKINA, K.A.; GUSAROVA, V.F.

Severe intoxication connected with ascariasis in a one-year-old baby. Vop.okh.mat. i det. 4 no.2:76-77 Mr-Ap '59.
(MIRA 12:5)

1. Iz kafedry fakul'tetskoy padiatrii Kazanskogo meditsinskogo instituta.
(ASCARIDS AND ASCARIASIS)

1. GUSAROVA, V. F.; YURZHENKO, A. I.

2. USSR (600)

4. Dispersion

7. Study of the dispersion of synthetic latexes in relation to the nature and concentration of the emulisifier and monomer, Koll. zhur., 14, No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March, 1953. Unclassified.

GUSAROVA, VALENTINA PETROVNA

ZHIVOV, Lev Grigor'yevich; GUSAROVA, Valentina Petrovna; GLADILIN, L.V., doktor tekhnicheskikh nauk, retsenzent; MARTYNOV, G.P., inzhener, retsenzent; TRIFONOV, Yu.T., inzhener, retsenzent; TARASOV, L.Ya., redaktor; SMOLDYREV, A.Ye., redaktor izdatel'stva; VAYNSHTEYN, Ye.B., tekhnicheskiy redaktor

[Remote control and automation of scraper loader hoists] Distantsionnoe i avtomaticheskoe upravlenie skrepernymi lebedkami. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1957. 222 p. (MIRA 10:9)

(Automatic control) (Excavating machinery)

GUBAROVA, V. P., Cand Tech ~~Agric~~ Sci -- (diss) "Study and determination of the basic parameters of scraper devices ~~installations~~." Moscow, 1958. 15 pp. (Min. of Higher Education USSR. Moscow Mining Inst ~~Inst. of Mining Engineers~~ im I.V.Stalin). 150 copies.
(KL, 38-58, 106).

21

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S/191/62/000/006/013/016
B117/B138

15.8121

AUTHORS: Fadeyev, P. M., Shibanov, G. N., Gusarova, Ya. I.

TITLE: Hardening of epoxy resins with quinoline derivatives

PERIODICAL: Plasticheskiye massy, no. 6, 1962, 59 - 60

TEXT: An attempt was made to harden epoxy resin (ЭДФ-3 (EDF-3)) with a mixture of cyclic compounds of the quinoline group (quinoline, isoquinoline, methyl and dimethyl quinoline). These heavy pyridine bases are inexpensive and easily available as by-products of coke production. Their use as hardeners made it possible to increase the filler content (cement) to 250% of the weight of the resin and thereby to lower the cost of the adhesive composition by two thirds. A special advantage of this composition is its long life (up to 48 hrs). Its strength, however, is lower than that of resin hardened with polyethylene polyamine (40 kp/cm^2 as against 70 kp/cm^2), but may be increased by heating at 60 - 80°C for 6 hrs. Adding a certain amount of polyethylene polyamine made it possible to increase the strength of the composition at room temperature (18 - 20°C) from 40 to

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70 kp/cm^2, after heating (60 - 80°C) from 73 to 130 kp/cm^2. To clarify the function of quinolines during hardening, a resin hardened at 80 and 120°C was extracted with boiling benzene in 6 hrs. Only 9 - 10% of the pyridine bases did not react. Attempts were made to glue concrete samples with the adhesives described. Mechanical tests of the samples gave satisfactory results. Investigation of the use of pyridine bases as hardeners for epoxy resins is continuing. There are 3 tables. The most important English-language reference is: E. S. Narracott, Brit. Plastics, no. 26, 120 (1953).

GUSARSKAYA, G.Yu. (Kazan')

How to conduct a class. Mat. v shkole no.4:16-18 Jl-Ag '63.
(MIRA 16:9)
(Mathematics--Study and teaching)

L 27184-65 EWG(j)/EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(j)/T/EMM(h)/EWA(1)
Pc-4/Pr-4/Ps-4/Pt-10/Peb/Pu-4 RPL WW/GG/RM

ACCESSION NR: AP5005898 S/0020/65/160/003/0646/0649

AUTHOR: Gol'danskiy, V. I. (Corresponding member AN SSSR); Rapoport, V. B.; Gusakovskaya, I. G.; Yegorov, Ye. V.; Korolev, G. V.

62
52
B

TITLE: Radiation polymerization of poly(alkyl acrylates)

19

SOURCE: AN SSSR. Doklady, v. 160, no. 3, 1965, 646-649

TOPIC TAGS: alkyl acrylate, alkyl methacrylate, polyalkylacrylate, polyalkylmethacrylate, radiation polymerization, free radical, hot radical theory, thermal polymerization, polymerization energy transfer

ABSTRACT: Because there is no published data on the subject, the authors studied the kinetics of radiation-induced polymerization of alkyl acrylates and compared the obtained relationships with those pertaining to the three-dimensional thermal polymerization of the same monomers. A method of direct measuring of the heat evolved in the polymerization, developed by the authors, was applied for the first time. Poly(alkyl methacrylate) oligomers (MB from butanediol and methacrylate) and two condensation products of butanediol and methacrylic and phthalic acid (MBP-1 and MBP-2), differing in the length

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ACCESSION NR: AP5005898

of the oligomer chain, were used. The viscosity of the medium was increased by adding varying amounts of an inert, highly viscous solvent, EDP-2 (a condensation product of isobutyric acid, diethyleneglycol and phthalic acid). Irradiation was carried out either in a GUT-400 Co^{60} installation (dose rate 3--21 rad/sec) or in an electron accelerator (dose rate 10^4--10^5 rad/sec) at 20--25C. The results were recorded by a thermograph, which produced the heat evolution curve vs the time of irradiation. Analytical processing of the data gave the curves of the reduced polymerization rate vs dose rate and vs the degree of conversion. It was found that, as in thermal polymerization, oxygen inhibits the process of radiation-induced polymerization, and that the process has a chain-radical mechanism of conversion. However, two differences were noted: 1) In radiation polymerization "hot radical" recombination in the rigid three-dimensional structure was more difficult. Therefore, it was assumed that the dissipation and the transfer of energy necessary for the propagation of the polymerization took place along the polymer chains, which acquired a certain mobility, and that energy transfer was effected by a gradual excitation of the energy levels along the chains. The latter assumption was confirmed by the independence of the polymerization rate on the

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ACCESSION NR: AP5005898

viscosity of the medium, which inhibits the direct diffusion of radicals. 2) Radiation polymerization produced complete conversion (up to 100%) whereas chemically induced polymerization cannot achieve such a high degree of conversion even at high temperatures. Energy transfer along the chains also explains the improvement in physical and mechanical properties of the polymers. For example, the heat stability of the radiation-induced poly(alkyl acrylates) is several times higher than that of chemically cured polymers. The increased energy of the separate elements of the three-dimensional structure apparently produces a relaxation of inner stresses, a kind of high-temperature "annealing" of the polymer. Orig. art. has: 3 figures and 1 table. [BN]

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 14Sep64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 007 OTHER: 002 ATD PRESS: 3191

Cord 3/3

GUSARSKAYA, I. L.

GUSARAKAYA, I. L.: "The methodology of determining the concentration of the
antibiotics sintomycin, levomycetin, and sintomycin stearate in the urine
and the blood serum." Leningrad Pediatric Medical Inst. Leningrad, 1956.
(Dissertation for the Degree of Candidate in Meidcal Science.)

Knizhnaya Letopis'
No 32, 1956. Moscow.

GUSARSKAYA, I.L.

Treatment of dysentery in children with ensynthomycin, a tastless synthomycin. Vop.okh.mat. i det. 1 no.2:40-43 Mr-Ap '56. (MIRA 9:9)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo pediatricheskogo instituta (dir.-prof. A.L.Libov) Leningrad.

(CHILDREN--DISEASES) (DYSENTERY) (CHLOROMYCETIN)

KLYACHKO, N.S.; GUSARSKAYA, I.L.; MASLENNIKOVA, L.K.; SENA, N.L.; TSIRLINA, S.S.

Specific prophylaxis against mumps. Report No.4: Epidemiological efficacy of living attenuated mumps vaccine inoculated intradermally in children [with summary in English]. Vop.virus. 3 no.1:28-33 Ja-F '58. (MIRA 11:4)

1. Virusologicheskaya laboratoriya Instituta imeni Pastera i Nauchno-issledovatel'skiy pediatricheskiy institut Ministerstva zdravookhraneniya RSFSR, Leningrad.

(MUMPS, prevention & control
living attenuated mumps vaccine, efficacy of intradermal inject. in children (Rus)

GUSARSKAYA, I.L., kand.med.nauk; PIK-LEVONTIN, E.M., kand.biologicheskikh nauk; KOMAKHINA, L.D.; PETROVSKAYA, Z.N.

Clinical and bacteriological characteristics of coli enteritis in children. Sov.med. 24 no.11:20-24 N '60. (MIRA 14:3)

1. Iz Leningradskogo nauchno-issledovatel'skogo pediatricheskogo instituta (dir. - L.S.Kutina) i Detskoy infektsionnoy bol'nitsy (glavnyy vrach A.M.Belyayeva) Leninskogo rayona Leningrada.
(INTESTINES--DISEASES)

GUSARSKAYA, I.L., kand.med.nauk; BALANOVA, T.B.; NEVEROVA, Ye.I.;
PIK-LEVONTIN, E.M., kand.biologicheskikh nauk

Work of a diagnostic enterology department. Vop. okh. mat. i det. 7 no.3:69-73 Mr '62. (MIRA 15:5)

1. Iz Leningradskogo pediatricheskogo nauchno-issledovatel'skogo instituta (dir. - zasluzhennyy RSFSR L.S.Kutina) i Detskoy infektsionnoy bol'nitsy Leninskogo rayona (glavnyy vrach - zasluzhennyy vrach RSFSR A.M.Belyayeva).

(GASTROENTEROLOGY)

GUSARSKAYA, I.L., kand.med.nauk; MASLENNIKOVA, L.K., kand.med.nauk;
KLUSHINA, T.A.

Clinical characteristics of epidemic outbreaks of adenovirus diseases in children. Sov.med. no.3:88-92 '62. (MIRA 15:5)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta detskikh infektsiy (dir. - prof. A.L. Libov) Instituta epidemiologii i mikrobiologii imeni Pastera (dir. M.Ya. Nikitin) i Leningradskoy gorodskoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach V.N. Kovshilo).

(ADENOVIRUS INFECTIONS)

GUSARSKAYA, I. L., starshiy nauchnyy sotrudnik; DUDKINA, K. A.

Effectiveness of treating epidemic influenza in children with some new preparations. Pediatriia no.6:24-28 '62. (MIRA 15:6)

1. Iz Leningradskogo pediatricheskogo nauchno-issledovatel'skogo instituta (dir. - zasluzhennyy vrach RSFSR L. S. Kutina) i detskoy infektsionnoy bol'nitsy Leninskogo rayona (glavnyy vrach K. A. Dudkina)

(INFLUENZA) (SERUM--THERAPY)

GUSARSKAYA, I.L., kand.med.nauk; DUDKINA, K.A.; MASLENNIKOVA, L.K., kand. med.nauk; YEPIFANOVA, K.I.

Clinical and epidemiological characteristics of adenovirus infections. Vop.okh.mat.i det. 7 no.4:6-10 Ap '62. (MIRA 15:11)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo instituta detskikh infektsiy (dir. - prof. A.L.Libov), Detskoy infektsionnoy bol'nitsy Leninskogo rayona (glavnyy vrach K.A.Dudkina), Leningradskogo nauchno-issledovatel'skogo instituta epidemiologii i mikrobiologii imeni Pastera (dir. - prof. V.G.Nikitina) i Gorodskoy sanitarno-epidemiologicheskoy stantsii Leningrads (glavnyy vrach V.N.Kovshilo).

(ADENOVIRUS INFECTIONS)

KOSIISKAYA, A.D., GUSMANSKAYA, [illegible].L.

Study of the reaction of completed phagocytosis in children with dysentery. Zhur. mikrobiol., epid. i immun. 41 no.11:8-11 '65.
(MIRA 18:5)

1. Leningradskiy institut detskikh infektsiy.

KISLITSYN, A.N.; GUSARSKAYA, N.L.; RAYSKAYA, I.P.

Modification of the composition of wood tar oils during vapor-phase pyrolysis. Gidroliz. i lesokhim.prom. 16 no.8:9-11 '63. (MIRA 17:1)

1. TSentral'nyy nauchno-issledovatel'skiy lesokhimicheskiy institut.

KISLITSYN, A.N.; GUSARSKAYA, N.L.

Neutral substances in the pyrolyzate of wood-tar oils. Report No.1: Isolation of carbonyl compounds from neutral oils. Gidroliz. i lesokhim.prom. 16 no.1:23-24 '63. (MIRA 16:2)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektnyy institut lesokhimicheskoy promyshlennosti.

(Wood-oil) (Carbonyl compounds)

SHARPENAK, A.E.; MIKHEYEVA, L.I.; NIKOLAYEVA, N.V.; SLOVOKHOTNOVA, I.A.;
BOBIK, G.S.; ALAYEVA, V.N.; STUPNIKOVA, G.A.; GUSAKOVA, I.A.;
GUSARSKAYA, V.V.; VOLCHEK, K.Ye.; SMIRNOVA, V.N.; PANOVA, V.V.;
KHERSONSKAYA, F.M.;

Connection between enamel, the dentine, and the organism as a whole. Vrach.delo no.2:203-205 F '59. (MIRA 12:6)

1. Kafedra biokhimii (zav. - prof.A.E.Sharpenak) Moskovskogo meditsinskogo stomatologicheskogo instituta.

(TEETH)

ACCESSION NR: AP4033645 S/0075/64/019/004/0522/0524

AUTHOR: Gusarskiy, V. V.; Tarasevich, N. I.

TITLE: Fixation of solid residue on the end of a carbon electrode for spectral analysis of solutions

SOURCE: Zhurnal analiticheskoy khimii, v. 19, no. 4, 1964, 522-524

TOPIC TAGS: carbon electrode, spectral analysis, solution analysis, solid residue, residue fixation, polystyrene protective film

ABSTRACT: This article describes an improved method for the spectral analysis of solid residue from lanthanide salt solutions. The proposed method for the fixation of solid residue on the end of a carbon electrode insures one of obtaining a porous layer of definite, well-reproducible thickness, free from the disadvantages of the usual method with the use of polystyrene protective film. The electrodes (6 mm in diameter) with about 0.5 - 1.0 mm indentation on the upper surface were soaked with 1 % solution of polystyrene in benzene. This was done either by dipping the ends of the electrodes into the solution for 5 - 6 hrs or soaking the electrodes in this solution under a vacuum. The latter method is somewhat more

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ACCESSION NR: AP4033645

complex, but it requires less time (~30 min). The electrodes were dried at room temperature. Following drying, the polystyrene was removed from the upper surface to a depth of 0.2 - 1.0 mm, depending on the nature of the analytical problem. Then, the side surface of the porous layer was covered with a 7 - 10 % solution of polystyrene in benzene or toluene, and the electrodes were dried. Due to such processing the upper surface of the electrode contains a thin porous layer including a polystyrene protective film cup. Such a polystyrene cup excludes the possibility of the penetration of the analyzed solution into the bulk of the electrode as well as to the surface, through the porous side surface of the electrode, and the dry salt residue is well fixed in the restricted porous layer of the electrode. The nature of the fixed solid residue layer on differently treated electrodes was investigated by x-ray analysis of deposits of cesium chloride. Electrodes, prepared in such a fashion were used for analysis of solutions of the most diversified composition, using power supply DG-2 (current 5.5a) and KSA-1 spectrograph. The article presents the results of the analysis of ferrocesium alloy. In ten determinations the relative average deviation for lanthanum was 3.7 %, for neodymium 4.2 %, presodymium 4.8 %, manganese 4.5 % and for iron 3.4 %. Orig. art. has: 1 table and 3 figures.

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ACCESSION NR: AP4033645

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 06May63 ENCL: 00

SUB CODE: OC, GC NO REF SOV: 006 OTHER: 003

Card 3/3

28 (5)

AUTHORS: Gegechkori, N. M., Perminova, V. M., SOV/32-25-8-28/44
Veselovskaya, I. M., Gusarskiy, V. V., Kozovlev, I. A., Dem'yanchuk, A. S., Galishnikova, Z. P., Pedan, G. A., Mamot, Zh. A., Stukovenkova, K. N., Sukhenko, K. A., Barasheva, T. V., Tishin, I. G., Amirkhanov, Sh. Kh.

TITLE: News in Brief

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 8, pp 981-983 (USSR)

ABSTRACT: 1) The authors determined the impurities of Si, Fe, Al, Mn, Mg, Cu, Ca, Bi, Pb, Sb, and Na in thorium dioxide with a sensitivity of 10^{-2}-10^{-4}% by burning a briquette from the sample mixed with carbon powder (3:1) in the crater of a carbon electrode type "ryumka". The spectograph ISP-22 was used. The analytical doublets are listed. 2) The author reports on the application of a photoelectric device FES-1 for the rapid analysis of open-hearth furnace slag for silicon dioxide (15-30%), calcium oxide (25-55%) and complete iron (5-15%). There is a description of the operational method. 3) The laboratoriya zavoda (Plant laboratory) applies a spectrum method for the determination of titanium impurities (of an approximately 0.01% concentration) in aluminum

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News in Brief SOV/32-25-8-28/44

alloys according to a series of standard samples. A spectrograph ISP-22 and an ac arc generator PS-39 were used. 4) The author reports on a method for localized spectrum analysis of steels and welded seams for the determination of phosphorus. The distribution of P was investigated in thin layers (up to 0.02 mm) of metals and welding seams by the use of a DG-1 generator and a quartz spectrograph and the phosphorus contents of microscopic inclusions and thin coatings were investigated. 5) The author determines calcium oxide and ferrous oxide in slags of electric furnaces in which the slag sample (0.2 g) was wetted with a saturated aqueous copper sulfate solution (2 ml) subsequently dried and put in the craters of two arc carbon electrodes. Spectrograph ISP-22 and generator DG-1 were used. 6) The author analyzed magnesite and magnesitic refractory substances by mixing the sample with carbon and barium nitrate (1:2:1) and evaporating it in the crater of a carbon electrode in an ac arc. A spectrograph ISP-22 was used. The use of this method was introduced at the Plant "Magnezit", Kuznetskiy metallurgicheskiy kombinat(Kuznetsk Metallurgical Kombinat) and Zaporozhskiy zavod ogneuporov (Zaporozh'ye Plant of Refractory Materials). 7) The authors apply a spectrum method for the determination of phosphorus

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pentoxide in zirconium dioxide. The determination takes only 2 hours. 20 mg of the sample mixed with carbon (1:1) is put into the carbon electrode and the spectrum lines are measured with a spectrograph ISP-28. 8) The authors, working in the laboratoriya instituta (Institute Laboratory) report the preparation of standard samples from technical Ti for the determination of hydrogen by the spectrum method. The article contains a description of the preparation method and the determination results according to different methods of the hydrogen in standard samples (Table). The difference is maximum relative ± 13.5%. 9) The author reports on a simple spectrum method for the determination of small quantities of Ba and Mn in calcium chloride water of high mineral contents. He used a spectrograph ISP-22, microphotometer MF-2 and standard samples. There are 1 figure and 1 table.

News in Brief SOV/32-25-8-28/44

ASSOCIATION: 1) Laboratoriya nauchno-issledovatel'skogo instituta (Laboratory of the Scientific Research Institute), 2) Zavod "Serp i molot" (Plant "Serp i molot"), 4) Institut elektrosvarki im. Ye. O. Patona Akademii nauk USSR (Electric Welding Institute imeni Ye. O. Paton of the Academy of Sciences of the UkrSSR), 5) Stalingradskiy metallurgicheskiy zavod "Krasnyy Oktyabr'" (Stalingrad Metallurgical Plant "Krasnyy Oktyabr'"), 6) Vsesoyuznyy nauchno-issledovatel'skiy institut ogneuporov, Khar'kov (All-Union Scientific Research Institute of Refractory Materials, Khar'kov), 7) Zhdanovskoye rudoupravleniye, g. Volnovakha (Zhdanov Mining Administration, City Volnovakha), 9) Ufimskiy neftyanoy nauchno-issledovatel'skiy institut (Ufa Petroleum Scientific Research Institute)

Card 4/4

RYABCHIKOV, D.I., doktor khim.nauk; KODYMSKIY, S.A., kand.khim.nauk;
GUSARSKIY, V.V., inzh.

Use of anionites in the purification of vegetable oils.
Masl.-zhir.prom. 26 no.4:33-35 Ap '60.
(MIRA 13:6)

1. Moskovskiy pedagogicheskiy institut imeni N.K.Krupskoy.
(Oils and fats) (Ion exchange)

GUSARSKIY, V.V.; KUZOVLEV, I.A.

New method for the quantitative spectral determination of elements.
Zav.lab. 26 no.12:1375-1378 '60. (MIRA 13:12)
(Trace elements—Spectra)

GUSARSKIY, V.V., inzh.; KUZOVLEV, I.A., inzh.

Effect of aluminum on the grain size of MA8 alloys. Metalloved. i term. obr.met. no.2:57 F '61. (MIRA 14:3)
(Magnesium-manganese alloys—Metallography)

S/032/62/028/002/014/037
B107/B101

AUTHORS: Gusarskiy, V. V., and Tarasevich, N. I.

TITLE: Spectroscopic sodium determination in aluminum alloys

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 2, 1962, 183 - 184

TEXT: A method was elaborated for determining small amounts of sodium (10^{-4}%) in aluminum alloys by two variants: (1) Dissolution of the sample in 1:1 HCl, decantation of copper, spectrum analysis with a glass fulgurator; (2) direct determination in metal. For calibrating the first variant, АЛ-19 (AL-19) aluminum was dissolved in a quartz vessel, and certain amounts of NaCl were added to the solution. An ИСП-51 (ISP-51) spectrograph was used for the spectrum analysis, an a-c arc of 1.5 - 2 a for excitation; burning time 1 min, exposure time 40 sec; four pictures are taken without switching off the arc while the plate holder is quickly moved on. The line Na I 5889.92 Å is photometrically measured, as well as the background on the shortwave side of the line. The calibration curve is plotted in the coordinates ΔS, log C. Experiments showed that the error of this method was below 10% between 0.0005 and 0.005% Na.

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S/032/62/028/002/014/037
B107/B101

Spectroscopic sodium determination...

Special test conditions guaranteed that the sodium content of the air did not noticeably affect the test results. For the second variant the following alloys were used: В-95 (V-95) with 0.00032% Na, АЛ-5 (AL-5) with 0.00052% Na, and АМГ-6 (AMG-6) with 0.00126% Na. (Data of the sodium content are mean values of four determinations). The following differences of analysis exist from the first variant: arc current 2.4 a, burning time 30 sec, exposure time 7 sec. The calibration curve is plotted in the coordinates ΔS, C; it is a straight line passing through the origin; therefore, one calibration sample is sufficient. An effect of the other alloy components on the sodium determination was not observed. The mean relative deviation does not exceed 3%. A 15-fold recording of the said calibration samples showed that sodium was evenly distributed in these alloys. There are 2 tables and 1 Soviet reference.

Card 2/2

KUZOVLEV, I.A.; GUSARSKIY, V.V.

Spectral method for determining a thousandths of one per cent of boron in aluminum alloys. Zav. lab. 28 no.9:1076-1078 '62. (MIRA 16:6)

(Aluminum alloys—Spectra)
(Boron—Analysis)

L 18913-63 BDS/EWT(m)/EWP(q) AFFTC/ASD JG/JD

ACCESSION NR: AP3006609 S/0129/63/000/009/0057/0058

59

AUTHORS: Gusarskiy, V. V.; Kuzovlev, M. A.

TITLE: Fining of MA8 alloy grains

18

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 9, 1963, 57-58

TOPIC TAGS: Alloy, metal, metal fining, MA8 alloy, metal grain structure, VM65-1 alloy, Zn, Zr, Mg, Mn, Ce, zinc, zirconium, magnesium, manganese, cerium

ABSTRACT: Authors developed a method for fining the structure of the MA-8 alloy (magnesium-manganese-cerium) which makes it possible to obtain up to 80% fine grain and from 1 to 3% coarse grain. The remainder consists of average grains. The fining effect is obtained by introducing VM65-1 alloy rejects into the charge. VM65-1 alloy contains 5.5% Zn and 0.5% Zr. Orig. art. Has: 1 table.

18

Card 1/1

GUSARSKIY, V.V.; TARASEVICH, N.I.

Spectral method for determining calcium in magnesium alloys.
Zav. lab. 30 no.8:952-953 '64. (MIRA 18:3)

GUSATINSKIY, A.N.

4

Selection of an optimum surface density of a sample for the investigation of x-ray absorption spectra. M. A. Blokhin and A. N. Gusatinskii. Bull. Acad. Sci. U.S.S.R., Phys. Ser. 20, 113-20(1956)(English translation).—See C.A. 50, 11809b. B. M. R.

2

GUSATINSKIY, A.N.

5.000

Selection of an optimum surface density of a sample for the investigation of x-ray absorption spectra. M. A. Blokhin and A. N. Gusatinskii (V. M. Molotov State Univ., Rostov). *Izvest. Akad. Nauk S.S.S.R., Ser. Fiz.* 20, 126-32 (1956).—It is shown on the example of Zn in Cu-Zn alloys that for ionization type registry there is an optimum d. of Zn in the surface layer. For photographic registration the selected sample was Pb(NO$_3$)$_2$. It is shown that the optimum d. for photographic registration is 2.0-2.5 times larger than that of ionization registration. S. Pakswer

L 20222-65 EWT(l)/EWG(k)/EWT(m)/T/EWP(t)/EWP(b)/EWA(h) Pz-6/Peb IJP(c)/
AFWL/SSD/SSD(c)/ASD(a)-5/BSD/AS(mp)-2/APGC(b)/RAEM(a)/ESD(gs)/ESD(t) JD/AT
ACCESSION NR: AP4038790 S/0048/64/028/005/0922/0933

AUTHOR: Gusatinskiy, A.N.; Nemnonov, S.A.

27

TITLE: Investigation of the L_{III} absorption spectra of antimony and the K absorption spectra of phosphorus in binary semiconductor compounds of $A^{III}B^{V}$ type (Report, Seventh Conference on X-Ray Spectroscopy held in Yerevan 23 Sept. to 1 Oct. 1963.)

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.5, 1964, 922-933

TOPIC TAGS: x-ray absorption, x ray spectrum, antimony, antimonide, indium antimonide, gallium compound, aluminum compound, phosphorus, phosphide, absorption spectrum

ABSTRACT: Binary semiconductor compounds of the $A^{III}B^{V}$ (Group III-Group V) type are attracting increasing interest both in view of their potential electronic engineering applications and because they form a large group of compounds of similar crystal structure but with systematically varying physical properties and chemical bonding (ionic to covalent). Earlier the authors (Fizika metalov i metallovedeniye, 3,361,1964) investigated the L_{III} absorption spectra of indium in some $A^{III}B^{V}$ compounds; in the present work there were studied the L_{III} absorption spectra of antimony and the K-absorption spectra of phosphorus in compounds of the same type, name-

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L 20222-65
ACCESSION NR: AP4038790

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ly, InSb, GaSb, AlSb, InP, GaP and AlP. These were compared with the K edge of phosphorus in the red and black allotropic forms and P in KH_2PO_4, which is a more ionic compound than the $A^{III}B^V$ compounds studied. (The black modification was prepared in the High Pressures Laboratory of the authors' Institute by the method of Bridgeman. "The authors thank K.P.Rodionov and Yu.P.Bazhin for assistance in obtaining the black phosphorus." "The InSb and GaSb were made available by N.A.Goryunov and the AlSb by I.A.Strel'nikova, to whom the authors are deeply grateful." The authors thank N.A.Goryunova for providing the AlP, InP and GaP specimens for investigation.") The antimony spectra were recorded in the second order by means of a Johann mounting spectrograph with a bent (R = 600 mm) quartz crystal with reflection from the $(10\bar{1}0)$ planes; resolution, 10,000. The K absorption spectra of phosphorus were recorded on a DRS vacuum x-ray spectrograph with a bent (R = 500 mm) quartz crystal with reflection from the $(10\bar{1}1)$ planes; resolution, about 10,000 . The experimental data are presented in the form of absorption curves and in tables. The results are discussed from the standpoint of crystal structure, etc. and compared with the results of some theoretical calculations. "The authors are grateful to V.A. Trapeznikov and Yu.P.Irkhin for useful discussions of the results." Orig.art.has: 2 formulas, 5 figures and 2 tables.

Card 2/3

L 20222-65
ACCESSION NR: AP4038790

ASSOCIATION: Institut fiziki metallov Akademii nauk SSSR (Institute of Physics of Metals, Academy of Sciences, SSSR)

SUBMITTED: 00 ENCL: 00

SUB CODE: OP, SS NR REF SOV: 016 OTHER: 012

Card 3/3

ACCESSION NR: AP4028994

S/0126/64/017/003/0361/0369

AUTHOR: Gusatinskiy, A. N.; Nemnonov, S. A.

TITLE: On the fine structure nature of the x-ray L_{III} absorption region of indium in semiconductor compounds

SOURCE: Fizika metallov i metallovedeniye, vol. 17, no. 3, 1964, 361-369

TOPIC TAGS: x-ray spectrum, absorption spectrum, indium, semiconductor, semiconductor compounds, fine structure, photoelectron scattering, wave scattering

ABSTRACT: The fine structure of x-ray L_{III} absorption spectra of indium in semiconductor compounds of the type $A^{III}B^{V}$:InSb, InAs, InP, InN, as well as in In_2Te_3 and In_2O_3 is studied. It is shown that the theory which explains the fine structure by the probability changes of the transitions P(E) caused by the scattering of the photoelectron wave in surrounding atoms is as applicable to the objects studied in this work, as to metals and alloys for which the theory was developed. The predominant effect of the first coordination spheres on the type of thin structure of the x-ray absorption spectrum is shown by way of comparing the spectra of compounds having an identical neighbor, but a different distant order. The authors made an attempt to find the phase of electron wave scattering $\eta_2(E)$ by way of comparing the

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ACCESSION NR: AP4028994

theoretical and experimental curves for the indium spectrum in the compound InSb. The study of the absorption probability as a function of the photon energy caused by the scattering of the photoelectron wave in the surrounding atoms $\tau_p(E)$ represents a two-fold interest: 1) since the effect of this factor on the absorption coefficient is not doubted, then by just taking $\tau_p(E)$ into consideration, it is possible to obtain the correct information relative to N(E); and 2) it should be anticipated that as a result of further development of the theory of this phenomenon, the possibility of producing a radial distribution of the absorbing atom potential from the experimentally found curve $\eta(E)$ will arise. Orig. art. has: 3 formulas and 4 figures.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of the Physics of Metals, AN SSSR)

SUBMITTED: 06Jly63

DATE ACQ: 27Apr64

ENCL: 00

SUB CODE: PH, GE

NO REF SOV: 006

OTHER: 007

Card 2/2

L 60891-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5018920 UR/0363/65/001/006/0877/0879
546.282-31:539.26

16
13
B

AUTHOR: Gusatinskiy, A. N.; Kolobova, K. M.; Mikhaylov, N. S.; Nemnonov, S. A.

TITLE: Use of x-ray spectra in the detection of silicon monoxide

27

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 6, 1965, 877-879

TOPIC TAGS: silicon oxide, x-ray fluorescence

ABSTRACT: SiO was obtained from a compacted equimolar mixture of powdered Si and SiO_2 by sublimation in a vacuum. The temperature in the reaction zone was 1375C, and in the condensation zone, 860C. Comparison of the chemical and x-ray data showed that the product consisted of a heterogeneous system made up of fine Si and SiO_2 particles. In order to obtain additional proof of this fact, $K_{\alpha 1,2}$ x-ray fluorescence spectra of silicon were taken in the product and also in pure silicon and SiO_2 (quartz). The results confirmed the earlier findings: SiO is actually a mixture of Si and SiO_2, the latter being apparently in an amorphous phase. This does not mean, however, that SiO cannot exist in the solid state. As indicated by the free energy change for the decomposition of SiO, the existence of this oxide and the existence of the mixture Si + SiO_2 are

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L 60891-65

ACCESSION NR: AP5018920

3

equiprobable. The study shows the usefulness of the x-ray spectral method in the identification of the compound SiO and approximate determination of the degree of its decomposition. In the case under consideration, this method was more sensitive than the x-ray structural method. "The authors are grateful to Prof. S. A. Semenkovich, who determined the free energy change of the reaction $2SiO_{(s)} \rightleftharpoons SiO_{2(s)} + Si_{(s)}$ as a function of temperature at their request." Orig. art. has: 1 figure and 1 formula.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Metal Physics, AN SSSR); Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy alyuminiyevo-magniyevyy institut (All-Union Scientific Research and Planning Institute of Aluminum and Magnesium)

SUBMITTED: 17Dec64 ENCL: 00 SUB CODE: IC, OP

NO REF SOV: 005 OTHER: 001

jlk

Card 2/2

GUSATINSKIY, A.N.; NEMNONOV, S.A.

Study of the L_{III} of the X-ray absorption spectrum of indium in the metallic state and in oxides of different valency. Izv. AN SSSR. Neorg. mat. 1 no.6:838-842 Je '65. (MIRA 18:8)

1. Institut fiziki metallov AN SSSR, Sverdlovsk.

GUSATINSKIY, A.N.; KOLOBOVA, K.M.; MIKHAYLOV, N.S., NEMNONOV, S.A.

Use of X-ray spectra for detecting lower silicon oxide. Izv. AN SSSR. Neorg. mat. 1 no.6:877-879 Je '65. (MIRA 18:8)

1. Institut fiziki metallov AN SSSR i Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy alyuminiyevo-magniyevyy institut.

TOMA, I.; GETIA, V.; GUSATU, N.

A new method for obtaining black iron oxide by precipitation.
Bul St si Tehn Tim 7:51-59 '62.

TOMA, I.; IOVI, A.; GUSATU, N.

Obtaining double potassium sulfate and calcium fertilizer from indigenous potassium ore. Bul St si Tehn Tim 7:61-69 '62.

SOKOLOWSKI, Adam; ACKERMAN, Janina; BARWIK-SCHRAMM, Alicja; BUNSCHWELKENS, Krystyna; GUSCHELBAUER, Tadeusz; NOWICKI, Zdzislaw

A case of hemi-algodystrophy in a woman with fibrous pulmonary changes. Pol. tyg. lek. 17 no.51:1995-1999 17 D '62.

1. Z Instytutu Reumatologicznego, Oddzial w Krakowie; dyrektor: prof. dr A. Sokolowski i z Zakladu Histologii AM w Krakowie; kierownik: prof. dr J. Ackerman.

(PAIN) (MUSCULAR DYSTROPHY)

DUBIKAJTIS, Lech; GUSCIORA, Henryk

A certain transformation invariant of Laguerre. Matem fiz chem Gdansk 2 23-32 '62.

1. Katedra Geometrii, Wyzsza Szkola Pedagogiczna, Gdansk.

DUBIKAJTIS, Lech; GUSCIORA, Henryk

Laguerre's geometry. Matem fiz chem Gdansk 2 47-60 '62.

1. Katedra Geometrii, Wyzsza Szkola Geometryczna, Gdansk.

GUSE, V.N.; LEGOSTAYEV, Ye.A.; SOBOLEV, V.M.

The productivity of electric lovomotives has been increased.
Elek. i tepl. tiaga no.2:14-16 F '57. (MLRA 10:5)

1. Nachal'nik depo Perm' II Sverdlovskoy dorogi (for Gusev)
2. Zamestitel' nachal'nika depo (for Legostayev) 3. Nachal'nik proizvodstvenno-tekhnicheskogo otdela (for Sobolev).
(Electric locomotives)

ACC NR: AP7001981 SOURCE CODE: GE/0030/66/018/002/0911/0922

AUTHOR: Guseinov, G. D.; Rasulov, A. I.

ORG: Institute of Physics, Academy of Sciences of the Azerbaidzhan SSSR, Baku

TITLE: Heat conductivity in gallium selenide single crystals

SOURCE: Physica status solidi, v. 18, no. 2, 1966, 911-922

TOPIC TAGS: single crystal, heat conductivity, gallium selenide

ABSTRACT: The thermal conductivity of laminated GaSe single crystals was studied in two crystallographic directions within the 90--600K range. Thermal conductivity was determined as highly anisotropic; in the direction parallel to the layers it exceeds conductivity in the direction perpendicular to the layers by almost one order of magnitude. The mean free path of the acoustic phonons is calculated from experimental data on lattice heat conductivity, sound velocity, and heat capacity. The mean free path in a direction perpendicular to the layers ($l'_{ph} = 15.8 \times 10^{-8}$ cm) was found to be limited to the thickness of the Se-Ga-Se quadruple layers corresponding here to the lattice parameter ($c = 15.883$ Å). The mean free path in a direction parallel to the layers ($l^{\parallel}_{ph} = 65 \times 10^{-8}$ cm) exceeds

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ACC NR: AP7001981

the corresponding parameter ($a = 3.734$ Å) by one order of magnitude. Within the high temperature range heat transfer was found to be effected by internal electromagnetic radiation. A study was made of the effect of unilateral compression in the direction of a weak van der Waals bond (0001) both on the lattice and the photon components of thermal conductivity in GaSe single crystals. [Authors' abstract]. [DW]

SUB CODE: 20/SUBM DATE: 22Aug66/ORIG REF: 008/OTH REF: 018/

Card 2/2

ACC NR: AP7001982 SOURCE CODE: GE/0030/66/018/002/0929/0935

AUTHOR: Guseinov, G. D.; Ismailov, M. Z.; Talybov, A. G.

ORG: Institute of Physics, Academy of Sciences of the Azerbaidzhan SSR, Baku

TITLE: On the new semiconducting compound $HgTlS_2$

SOURCE: Physica status solidi, v. 18, no. 2, 1966, 929-935

TOPIC TAGS: semiconductor crystal, semiconductor conductivity, semiconductivity, semiconducting material

ABSTRACT: A new three-component compound corresponding to the stoichiometry of $HgTlS_2$ was found and investigated. $HgTlS_2$ was synthesized by fusing the corresponding elements according to stoichiometry; the initial elements Hg, Tl, and S had a purity of 99.9999%. The monocrystalline $HgTlS_2$ specimens used for the measurement of electrical, photoelectrical, and thermal properties were obtained by a subsequent zonal recrystallization with additional heating. Specimens for the electron diffraction studies were prepared in the form of layers with a thickness of about 10^{-5} to 10^{-6} cm by evaporating $HgTlS_2$ in a vacuum of the order of 10^{-4} Torr. After condensation, the specimens were subjected to annealing at the same temperatures. The semiconducting character of $HgTlS_2$ was confirmed by experiments on the electrical, photochemical, and optical

ACC

properties of this compound. The temperature dependence of its electrical conductivity was measured by means of the compensation method, with the exception of the low-temperature region, where a bridge circuit was used because of the high resistance of the specimens. The conductivity grows exponentially with the temperature, which is characteristic of semiconductors. The high temperature activation energy value ΔE_0 = 1.28 eV agrees with the value of the width of the forbidden zone of $HgTlS_2$. Optical studies indicated that the region of intrinsic conductivity was reached in the investigated temperature range. The $HgTlS_2$ crystals proved to be highly photosensitive. The maximum of photoconductivity corresponds to λ_m = 0.828 μm. The width of the forbidden zone for $E_{1/2}$, $E_{1/2}$(300K) = 1.25 eV, was in good agreement with the results of electrical measurements. The heat conductivity in the low-temperature region varies according to T^{-1}. At temperatures above 200K, the heat conductivity of the $HgTlS_2$ lattice is proportional to $T^{-0.7}$, while at temperatures above 480K it varies as T^{-2}. At low temperatures, the sign of thermal emf was negative. At 400K, the sign changed from negative to positive. Within the whole temperature range investigated (100 to 550K) the coefficient of the thermal emf varied from -300 μV/deg to -815 μV/deg; the positive value varied from 345 μV/deg to 920 μV/deg. The authors thank Prof. G. B. Abdulayev and K. S. Mamedov for valuable advice. Orig. art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 16Sep66/ ORIG REF: 005/ OTH REF: 004/ ATD PRESS:5111

ACC NR: AP7003905 SOURCE CODE: GE/0030/67/019/001/K007/K010

AUTHOR: Guseinov, G. D.; Rasulov, A. I.; Kerimova, E. M.; Ismailov, M. Z.

ORG: Institute of Physics, Academy of Sciences of the Azerbaidzan SSR, Baku

TITLE: Heat conductivity of $A^{III} B^{VI}$-type semiconductors

SOURCE: Physica status solidi, v. 19, no. 1, 1967, K7-K10

TOPIC TAGS: heat conductivity, semiconductor crystal, high temperature effect, activation energy, exciton, crystal anisotropy

ABSTRACT: The result of experimental investigations of the heat conductivity of crystals of $A^{III} B^{VI}$ compounds over a wide temperature range at different crystallographic directions are given. In the region of comparatively low temperatures, the total measured heat conductivity of almost all $A^{III} B^{VI}$ compounds corresponds to the net lattice heat conductivity. The possible electronic components, shown by calculations, is quite negligible in this region, while the order of magnitude of the calculated values of the lattice heat conductivity coincides with that of the measured values of the heat conductivity. The relation-

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ACC NR: AP7003905

ship of the temperature-heat conductivity of GaS single crystals obtained from gallium monochalcogenides is somewhat weaker than should be expected from the theory of lattice heat conductivity. The heat conductivity of TlS and TlTe crystals decreases with an increase of temperature. The heat conductivity of GaS, GaSe, GaTe, InS, and InSe crystals increases at high temperatures (T > 380 to 490° K) due to the appearance of additional heat conductivity. This additional portion of the total heat conductivity increases exponentially for InS and InSe crystals within the high-temperature range T > 400 to 480° K, and for GaSe and GaTe up to a certain temperature. According to electrical measurements, the intrinsic conductivity region for the above crystals was not received within the temperature range investigated. The exponential increase and the low value of the activation energy within this range is transfered by excitons. Sharp anisotropy of the heat conductivity is representative of laminated $A^{III} B^{VI}$ crystals over the whole temperature range investigated. The authors thank Professor G. B. Abdullaev for his valuable advice. Orig. art. has: 1 figure. [NT]

SUB CODE: 20/SUBM DATE: 23Nov66/ORIG REF: 006/OTH REF: 003/

Card 2/2

L 43529-66 EEC(k)-2/T/EWP(t)/ETI/EWE(k) IJP(c) RTW/WG/JD/JG/AT

ACC NR: AP6012809 SOURCE CODE: GE/0030/66/014/002/K127/K130

71

B

AUTHOR: Abdullaev, G. B.; Mekhtiev, R. F.; Mamedova, A. Z.; Guseinova, E. S.

ORG: Institute of Physics, Academy of Sciences, Azerbaydzhan SSR, Baku

TITLE: Investigation of photoconductive relaxation in p-GaSe single crystals

SOURCE: Physica status solidi, v. 14, no. 2, 1966, K127-K130

TOPIC TAGS: relaxation process, majority carrier, minority carrier, photoconductivity

ABSTRACT: Photoconductive relaxation in p-GaSe produced by short light pulses was studied in order to determine the lifetime of majority and minority carriers. Photoconductivity decay terms indicate the presence of two exponential components with different time constants. It is shown that the time constant of the high speed component is almost independent of temperature within the range 150 to 355°C while the low speed component changes. This can be explained on the basis of recombination through traps having a high concentration. It is concluded that the high- and low-speed components are associated with the electron and hole components of photoconductivity, respectively. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 27Jan66/ ORIG REF: 008/ OTH REF: 001

Card 1/1

G[illegible], G. [illegible]

Effect of change in the [illegible]
interlayer on the fluid [illegible] Dokl.
AN Azerb. SSR 21 no.3:3[illegible] [illegible]

[illegible]

L 36839-66 T/EWT(t)/ETI IJP(c) RDW/JD

ACC NR: AP6024348 SOURCE CODE: GE/0030/66/016/001/0205/0208

56

AUTHOR: Abdullaev, G. B.; Guseinova, E. S.; Tagiev, B. G.

B

ORG: Institute of Physics, Academy of Sciences of the Azerbaidzhan SSR, Baku

TITLE: Electrical conductivity of p-GaSe single crystals in strong electric fields

SOURCE: Physica status solidi, v. 16, no. 1, 1966, 205-208

TOPIC TAGS: electrical conductivity, gallium selenide, dielectric constant, dielectric breakdown, ELECTRIC FIELD

ABSTRACT: The electrical conductivity of p-GaSe single crystals was measured in strong electric fields up to 3×10^4 v/cm. The duration of the pulses was 4 μsec and the repetition rate 50 cps. When the field was about 1600 v/cm, Ohm's law was not obeyed and the conductivity increased with the field according to Frenkel's law: $\sigma = \sigma_0 e^{\beta \sqrt{E}}$, where $\beta = \sqrt{e^3}/k T\sqrt{\varepsilon}$ and ε is the dielectric constant. From the temperature dependence of β the value of the dielectric constant of p-GaSe single crystals was established to be approximately five. The hole activation energy, determined from the temperature dependence of the conductivity, decreased with the increasing field, thus agreeing with Frenkel's theory. By extrapolating the $\lg \sigma = f(1/T)$ (straight lines) a thermal breakdown temperature equal to about 25,000K was found which can be referred to as the metallization temperature (T_m). It was established that $kT_m \simeq 2$ ev is the thermal energy gap at absolute zero. By extrapolating the $\lg \sigma = f(\sqrt{E})$ (straight lines) a breakdown intensity E_b, which characterizes

Card 1/2

L 36839-66

ACC NR: AP6024348

the electrical strength, was found to be $\sim 10^7$ v/cm. The width of the energy gap ΔE_0, obtained from the expression: $\Delta E_0 = 2 e \sqrt{eE_b}/\varepsilon$ appeared to be about 1.9 ev. Orig. art. has: 2 figures. [CS]

SUB CODE: 20/ SUBM DATE: 07Mar66/ ORIG REF: 006/ OTH REF: 005/ ATD PRESS: 5038

Card 2/2

GUSEL', A.; SIDORENKO, V.; KLIMENT'YEV, I.

Recommendation on the adjustment of the KKKh-3 corn harvester.
Trakt. i sel'khozmash. 32 no.5:44-46 My '62. (MIRA 15:5)

1. Khersonskiy kombaynovyy zavod.
(Corn (Maize)) (Harvesting machinery)

RESHETNIK, N.L., inzhener; GUSEL', A.A., inzhener.

Automatic and semi-automatic welding of joints of a locomobile boiler with the use of optical indicators. Avtog.delo 24 no.5:19-21 My '53. (MLRA 6:5)
(Electric welding)

Gusel', Ye. B.

73-3-2/24

AUTHOR: Pamfilov, A. V., Lopushanskaya, A. I., and Gusel', Ye. B.

TITLE: On the Complexes of Certain Metals with Polyphosphate. (O Kompleksakh Nekotorykh Metallov s Polifosfatom).

PERIODICAL: Ukrainskiy Khimicheskiy Zhurnal, 1957, Vol.23, No.3, pp. 297-302 (USSR).

ABSTRACT: Polyphosphates are able to give complexes with the ions of various metals. These complexes are formed when the precipitates of the salts of bi-valent metals are dissolved in excess polyphosphate solution. The polyphosphates have found wide application in the treatment of industrial waters. The authors based their investigation on Van-Wazer's (Ref. 1) method who had worked with pentaphosphates; similarly as Van-Wazer they used polarographic methods and studied the complex-formation of sodium triphosphate with nickel, cobalt, copper, zinc, lead and cadmium. All described tests were carried out on a polarograph IIB - 1 of the Leningrad factory "Geologorazvedka" during 1953. The ions of the simple salts of the tested metals gave well defined polarographic waves. The data of the half-wave potentials (Table 1) agree with values obtained by other authors (Ref. 7). It can be seen that these half-waves are still well defined in the case of zinc when an equivalent quantity of sodium

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On the Complexes of Certain Metals with Polyphosphate.

triphosphate is added but they are shifted towards the negative values. The waves of these ions disappear when further quantities of triphosphate are added. Solutions of nickel-, cobalt-, copper or zinc-salts do not give precipitates with a solution of triphosphate; however, solutions of lead- or cadmium-salts give a white precipitate which is soluble in excess triphosphate. The potentials of the half-waves shift towards the negative values during the polarography of lead and cadmium-salt solutions in the presence of considerable excess of Na-triphosphate. Figure 1 gives the dependence of log $i/(i_d - i)$ on the potential, obtained from the polarogram of a 1.10×10^{-3} mole lead solution, 0.35 mole triphosphate and a 1.0 N potassium nitrate (Fig. 2). The carbon coefficient = 0.036 v which nearly equals the calculated value of 0.030v, when n = 2. The relation of the half-wave potential of lead and the concentration of triphosphate is given in Table 2 and Figure 3, the relation of the half-wave potential of cadmium and the concentration of KNO_3 is given in Table 3. Table 4 illustrates the changes in the half-wave potential of cadmium with the concentration of

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On the Complexes of Certain Metals with Polyphosphate.

Na-triphosphate. At increasing concentration of the triphosphate a shift towards the negative values is observed on the half-wave potential of cadmium. The dissociation constant was calculated and was found for cadmium to be $K = 9 \times 10^{-10}$. There are 4 tables, 7 figures and 9 references, 4 of which are Slavic.

SUBMITTED: May, 23, 1956.

ASSOCIATION: Chernovtsy University, Physical Chemistry Laboratory. (Chernovitskiy Universitet, Laboratoriya Fizicheskoy Khimii)

AVAILABLE: Library of Congress.

Card 3/3

GUSEL'NIKOV, A. A.

SHEVCHENKO, F. P. andGUSEL'NIKOV, A. A. "Granosan in the Control of Sunflower Diseases," *Selektsiia i Semenovodstvo*, vol. 18, no. 9. 1951, pp. 73-74. 61.9 Se5

SO: SIRA SI-90-53, 15 Dec 1953

GUSEL'NIKOV, A.A.

Use of a cone-shaped intensely sharp arc for the spectral analysis of powdered samples. Zav.lab. 29 no.8:937-938 63. (MIRA 16:9)

1. TSentralnaya khimiko-analiticheskaya laboratoriya Geologorazvedochnogo tresta Ministerstva geologii i okhrany nedr.

(Spectrum analysis)

GUSEL'NIKOV, A. L.

Bee culture. 3. ispr. i dop. izd. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1954.
612 p.

GUSEL'NIKOV, Aleksey L'vovich; GRIGOR'YEV, Ye.P., red.; PEYZNER, V.I., tekhn. red.

[Beekeeping] Pchelovodstvo. Izd. 4, ispr. i dop. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 535 p. (MIRA 14:5)
(Bee culture)

SOV/86-58-11-33/37

AUTHOR: Gusel'nikov, A. Ye., Sen. Tech Lt

TITLE: How We Carry Out Routine Maintenance (Kak my vypolnyayem reglamentnyye raboty)

PERIODICAL: Vestnik vozdushnogo flota, 1958, Nr 11, pp 88-89 (USSR)

ABSTRACT: The author describes briefly how the technical personnel of his maintenance group strive to make improvements and to increase the efficiency of labor.

Card 1/1

GUSEL'NIKOV, A.Ye., kapitan tekhnicheskoy sluzhby, voyennyy letchik
pervogo klassa

Creativeness not merly for the sake of creativeness. Vest.
Vozd.Fl. no.2:59-60 F '61. (MIRA 14:7)
(Airplanes—Maintenance and repair)

GUSEL'NIKOV,E.M., inzh.; ROTT, V.Zh., inzh.

Series of single-rod electrohydraulic pushers. Elektrotekhnika 36 no.8:55 Ag '64. (MIRA 17:9)

1. GUSEL'NIKOV, G. D., Engr.

2. USSR (600)

4. Tsimlyansk Hydroelectric Power Station-Cement

7. Cement stores at the TSimlyansk hydroelectric power station on the Volga-Don Construction Project.
Mekh. stroi. 9 No. 11, 1952

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Uncl.

GUSEL'NIKOV, G.D., inzh.

Effect of using normal-pressure steam in curing concrete. Gidr.stroi.31 no.2:22-25 F '61.
(MIRA 14:3)

(Autoclaves) (Concrete—Curing)

GUSEL'NIKOV, I. I.

"A Case of Finding a Meteorite in the Nyandel'ga River Basin," Priroda, No. 1, 1948

NIKOLAYEV, Nikolay Leonidovich; GUSEL'NIKOV, I.I., otvetstvennyy redaktor;
KOROVENKOVA, Z.A., tekhnicheskiy redaktor

[Mine geology of coal deposits] Shakhtnaia geologiia ugol'nykh
mestorozhdenii. Moskva, Ugletekhizdat, 1956. 170 p. (MLRA 9:11)
(Coal geology)

ZUBKOV, Vasiliy Vasil'yevich; GUSEL'NIKOV, I.I., otvetstvennyy redaktor;
RYKOV, N.A., redaktor izdatel'stva; KOROVENKOVA, Z.A., tekhnicheskiy redaktor; ALADOVA, Ye.I., tekhnicheskiy redaktor

[Brief course in general petrology] Kratkii kurs obshchei petrografii.
Izd. 2-oe, perer. i dop. Moskva, Ugletekhizdat, 1956. 255 p.
(Petrology) (MLRA 10:8)

TROYANSKIY, Sergey Vasil'yevich, prof.; VASIL'YEV, Sergey Petrovich, dots.; BOGACHEVA, Yevgeniya Nikolayevna; PERFIL'YEVA, Zoya Georgiyevna, inzh.; GUSEL'NIKOV, I.I., dots., otv. red.; SLOVOROSOV, A.Kh., red. izd-va; BOLDYREVA, Z.A., tekhn. red.

[Geology and prospecting of coal deposits and fundamentals of general geology and hydrogeology] Geologiia i razvedka ugol'nykh mestorozhdenii s osnovami obshchei geologii i gidrogeologii. By S.V.Troianskii i dr. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 319 p. (MIRA 14:11)
(Mine surveying) (Coal—Geology)

BELOUSOVA, Ol'ga Nikolayevna; GUSEL'NIKOV, I.I., kand. geol.-miner. nauk, dots., otv. red.; BABIKOVA, V.P., tekhn. red.

[Determining plagioclases by the zonal method] Opredelenie plagioklazov zonal'nym metodom; rukovodstvo k prakticheskim zaniatiam po fedorovskomu metodu dlia studentov geologorazvedochnoi spetsial'nosti. Moskva, Rosvuzizdat, 1962. 22 p.
(MIRA 17:1)

L 16027-65 EWG(j)/EWT(m)/EPF(c)/EPF(n)-2/EWP(j)/T/EWA(h)/EWA(1) Pc-4/Pr-4/Peb/
ACCESSION NR: AP4049152 Pu-4/ ASD(m)-3/AFETR S/0190/64/006/011/2002/2007
GG/RM

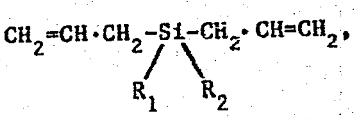
AUTHOR: Gusel'nikov, L. Ye.; Nametkin, N. S.; Polak, L. S.; Cherny*sheva, T. I.

TITLE: Polymerization of diallylsilanes under the action of γ-radiation 19

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 11, 1964, 2002-2007

TOPIC TAGS: organosilcon compound, diallyl silane, allylsilane, polymerization, ionized radiation, ionized radiation induced polymerization, gamma radiation

ABSTRACT: The mechanism of γ-ray-induced polymerization of diallylsilanes has been investigated. Monomers of the following general compositions were used:



$CH_2{=}CH{\cdot}CH_2{-}\underset{R_1\quad R_2}{Si}{-}CH_2{\cdot}CH{=}CH_2$, in which 1) $R_1=R_2=CH_3$

2) $R_1=R_2=C_2H_5$

3) $R_1=CH_3$; $R_2=C_6H_5$, and

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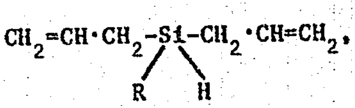
ACCESSION NR: AP4049152



$CH_2=CH\cdot CH_2-\underset{R\quad H}{Si}-CH_2\cdot CH=CH_2$, in which 1) $R=CH_3$

2) $R=C_2H_5$

3) $R=C_6H_5$

Polymerization was carried out in benzene, in glass ampoules, in the absence of oxygen. Co^{60} was used as the γ-radiation source, having a rate of $1.5\cdot 10^6$ r/hr at 30C. Light, soluble, and fusible powders with 50—110C melting points were obtained. The basic composition of the polymers obtained was that of the monomers. The IR spectra and the low unsaturation of the polymers indicate that polymerization occurs according to the intermolecular-intramolecular mechanism, which produces the following six-membered organosilicon ring:

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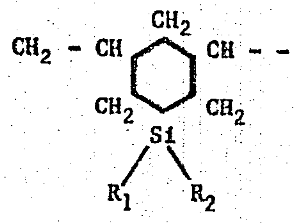
L 16027-65
ACCESSION NR: AP4049152



Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 20Jan64
ENCL: 00
SUB CODE: GC, NP

NO REF SOV: 005
OTHER: 005
ATD PRESS: 3141

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L 22440-65 EWG(j)/EWT(m)/EPF(c)/EPF(n)-2/EWP(j)/T/EWA(h)/EWA(1) Pc-4/Pr-4/
Pu-4/Peb GG/RM
ACCESSION NR: AP5000485 S/0062/64/000/011/2072/2072

AUTHOR: Gusel'nikov, L. Ye.; Nametkin, N. S.; Polak, L. S.; Cherny*sheva, T. I.

TITLE: Radiation polymerization of triallylsilanes

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 11, 1964, 2072

TOPIC TAGS: radiation polymerization, triallylsilane, cyclopolymerization, methyltriallylsilane monomer, phenyltriallylsilane monomer, residual unsaturation

ABSTRACT: This article deals with the cyclopolymerization of methyltriallylsilane and phenyltriallylsilane monomers in a 10% benzene solution subjected to gamma irradiation with a dose rate of 1.5×10^6 r/hour and at 30 C. Both silanes formed white powders which are easily soluble in various solvents and melt at 60-100C. Yield was 86 and 64% respectively. Comparison of the optical density of double-bond valence vibrations in monomer and polymer showed a 13-20% residual unsaturation. It is assumed that the cyclopolymerization reaction proceeds with formation of mono and bicyclic links in the main polymer backbone.

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